

## On the presence of *Pleurochaete* Lindb. (Pottiaceae, Musci) in Argentina

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### Short communication

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*Pleurochaete* is a genus represented in America by two species, *P. luteola* (Besch.) Thér., which is endemic (Fig. 1A), while *P. squarrosa* (Brid.) Lindb. has a world-wide distribution (except Australia, Oceania and Antarctica). The genus consists of terrestrial taxa. Plants are small to robust, greenish brown to yellowish green, with incurved to strongly twisted leaves when dry, and stems with a reduced central strand and a sclerodermis surrounded by a hyalodermis. The leaves have a sheathing base, with a hyaline border that extends to about midleaf, and the nerve in cross section is semicircular to reniform with two stereid bands.

In the literature, *P. luteola* has been considered to be a synonym of *P. squarrosa* (Crum and Anderson 1981, Zander 1994) or a variety of the latter (Zander 1993). However, after studying specimens from the USA, Bolivia and Argentina, we agree with Allen (1994), and consider that both taxa can be best considered as separate species. *Pleurochaete luteola* differs from *P. squarrosa* in having a more robust habit, twisted and spirally contorted leaves when dry, a thinner leaf border that exceed midleaf, and hyaline cells that are strongly denticulate above (Table 1, Fig. 2).

In northwestern Argentina, we observed *P. luteola* as a relatively frequent element in xerophytic deciduous forests in Salta and Tucumán provinces. In addition, *P. ecuadoriensis* Broth. has been mentioned as

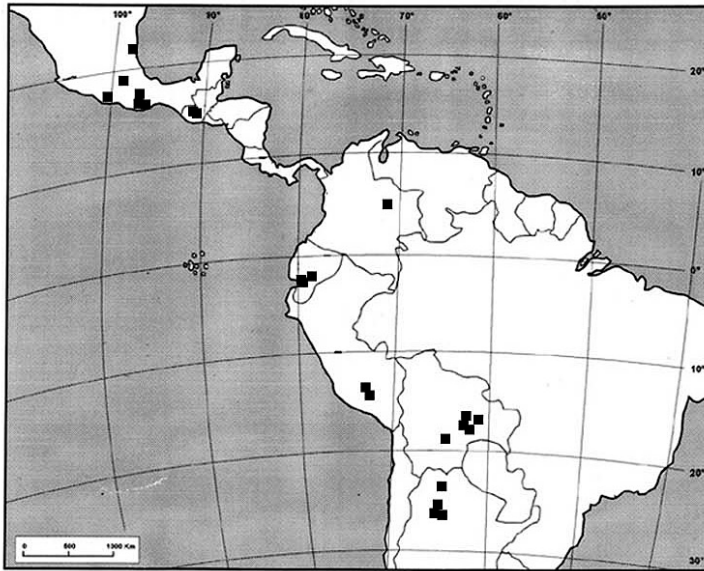
being found in the Jujuy province, also in NW Argentina (Hilpert 1933). Examination of the material (Hicken 560, JE) showed that the specimen belongs to *P. luteola*.

*Pleurochaete squarrosa* has been found in central eastern Argentina, along the banks of the Uruguay River (Matteri and Farias 2003). In spite of the fact that the hyaline cell was described as extending from the base to well above the midleaf (Matteri and Farias 2003), this does not agree with our observations.

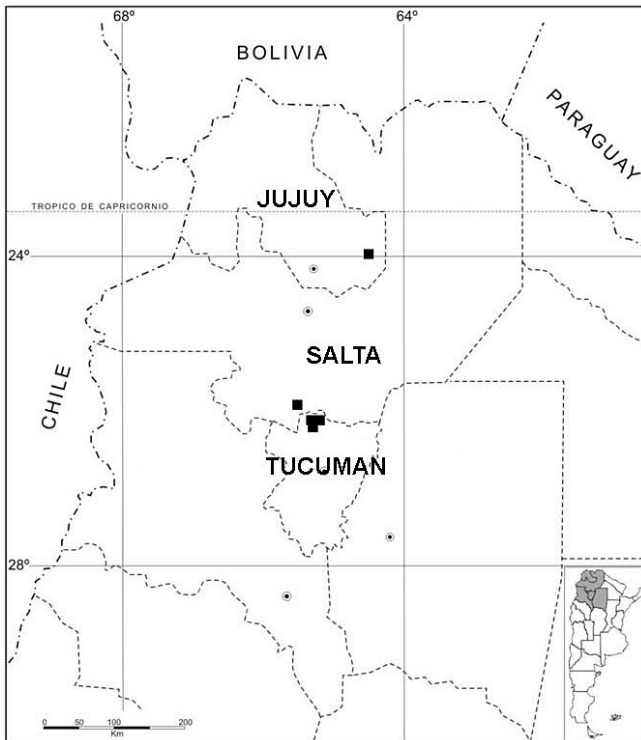
We have observed only antheridia in Argentinean *P. luteola* material, while archegonia and antheridia have been observed in *P. squarrosa* from middle Tennessee (Quarterman 1956). However, sporophytes of any species are so far unknown in either Argentina or other South America countries. Furthermore they are rarely produced in North America (Haring 1936). Thus, vegetative propagation appears as the only way to explain *P. luteola* distribution, extending from the southern USA along the Andean mountains to northwestern Argentina (Fig. 1B). Equally intriguing, the apparently disjunct distribution of *P. squarrosa* may be an artifact resulting from the lack of, or poor exploration in most Latin American countries.

### Specimens examined

*Pleurochaete luteola*. **BOLIVIA**. Quebrada Honda, ca 5.5 km nordeste de Vallegrande. Bosque xéricos interandinos con abundante *Schinopsis haenkeana*, 18°25'S 64°07'W, 1940 m, 28 February 2002, leg. S.



A



B

Fig. 1 Distribution of *P. luteola* in the Neotropics (A) and northwestern Argentina (B).

Fig. 2. *Pleurochaete luteola* (A-D) and *P. squarrosa* (E-H). (A, E): habit in wet. (B, F): two leaves. (C, G): mid leaf marginal cells. (D, H): leaf apex.

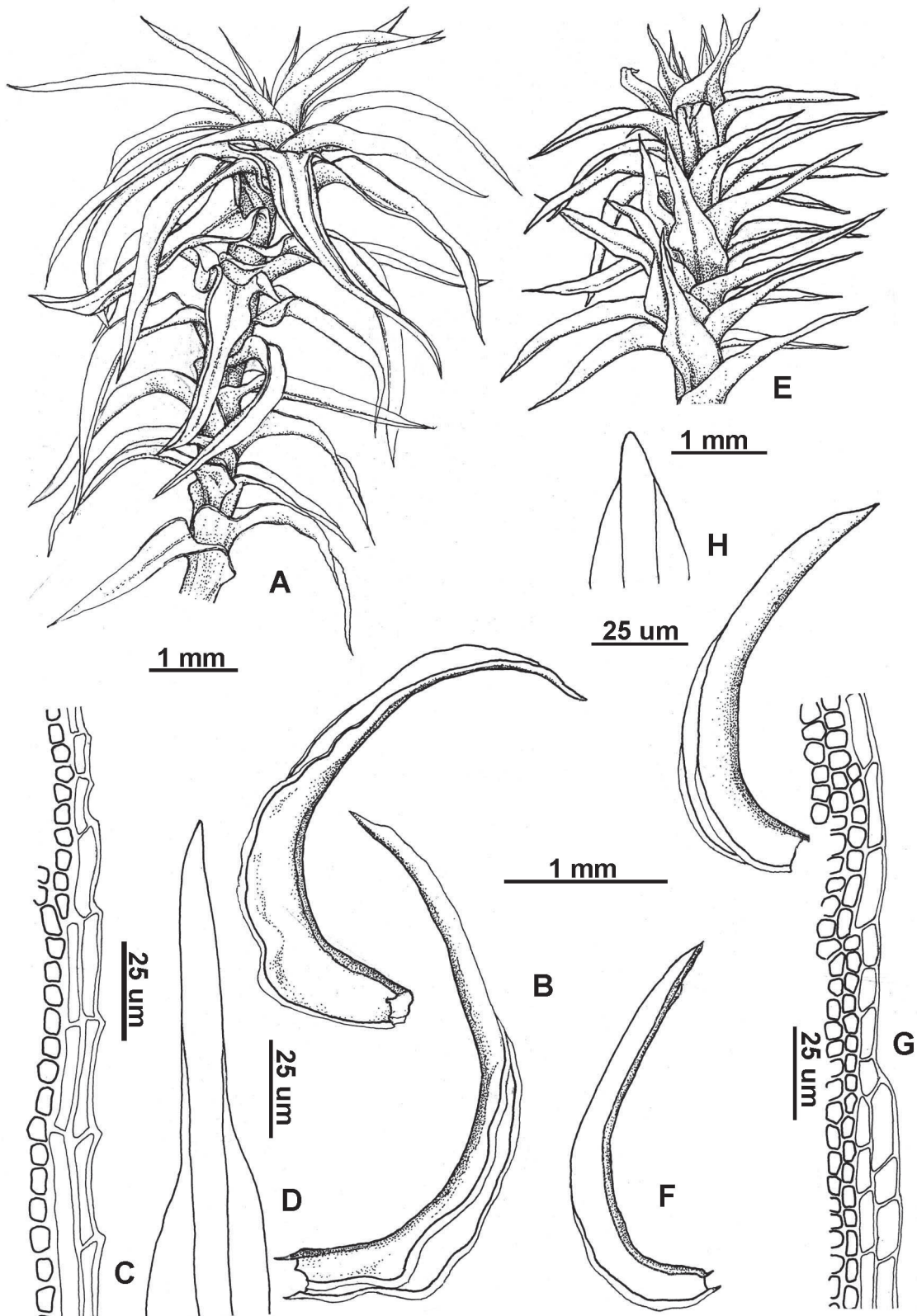


Table 1. Comparison of morphological characters between *Pleurochaete luteola* and *Pleurochaete squarrosa*.

	<i>Pleurochaete luteola</i>	<i>Pleurochaete squarrosa</i>
Plant size (cm)	medium to robust (3.0–8.0)	small to medium (1.1–3.0)
Leaf length	3.0–6.0 mm	2.0–2.3 mm
Hyaline cells leaf border above	denticulate	entire
Length of leaf border	exceed ½ leaf length	not exceeding ½ leaf length
Leaf base	more highly sheathing	sheathing
Awn	long	short
Central strand	poorly differentiated	well differentiated

Churchil & L. Arroyo 21250 (LIL). **ARGENTINA.** TUCUMÁN, Dpto. Trancas. San Pedro de Colalao, Monte Bello, 26°15'S 65°30'W, 12 January 2002, leg. G. Suárez 65, 74 (LIL); Monte Bello, 26°15'S 65°30'W, 07 August. 2002, leg. G. Suárez & M. Schiavone 84, 90, 94 (LIL). SALTA, camino a El Jardín, Bosque Chaqueño Serrano, 11 April. 2003, leg. G. Suárez 132 (LIL); Dpto. Guachipas, “Las Bolsitas”, camino entre El Jardín y Pampa Grande, 26 Nov. 2004, leg. A. Slanis & A. Grau 3213 (LIL). JUJUY, 23 May 1903, C. M. Hicken 560 (JE). **USA.** Texas, Brewster Co., Big Bend National Park, South Rim Trail zum Emory Peak, Chisos Mts., 1700–2300 m; 05 June 1959, leg. R. A. Anderson et S. Shushan 4370 (LIL);

***Pleurochaete squarrosa*. USA.** Missouri, Taney Country, Hercules Glade Wilderness Area, Mark Twain National Forest. NW ¼, sec. 12, T.25N, R. 16W, 24 October 1993. Leg: P. Redfearn & A. Redfearn 116 (BA, LIL); Arkansas, Juniperous-limestone glade on gentle SE slope 11 mi. NW of Berryville. 03. July 1953. Leg. D. Moore & H. Iltis 027 (LIL). **ARGENTINA.** ENTRE RIOS, Colón, Parque Nacional “El Palmar”, 32°13'S 58°08'W, 0–50 m alt., 1984, Leg. A. Bonavía 1710 (BA, LIL).

**EUROPE. CZECH REPUBLIC.** Moravia austro-occid. Moravský Krumlov, in desertis stepposis prope capellam Sti Floriani ad substratum form. Permanicae. Ster., ca 250 m s. m., 06 April 1913, Leg Jos. Podpera 14641 (LIL).

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